

TITLE

Process for preparing imidazoquinolinamines

FILING FEE

FEES: Authority has been given in Paper  
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ACCOUNT

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- 1.18 Fees ( Issue )
- Other \_\_\_\_\_
- Credit

10/624,014

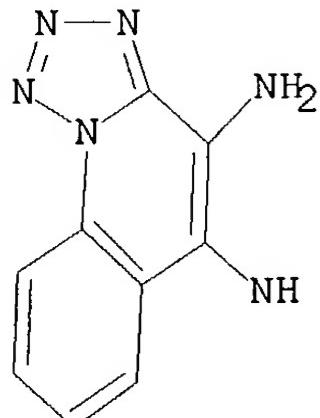
=> file caplus  
FILE 'CAPLUS' ENTERED AT 10:48:10 ON 12 JAN 2004  
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FILE COVERS 1907 - 12 Jan 2004 VOL 140 ISS 3  
FILE LAST UPDATED: 11 Jan 2004 (20040111/ED)

This file contains CAS Registry Numbers for easy and accurate substance identification.

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L2 STR



G1 NH2,NO2

Structure attributes must be viewed using STN Express query preparation.

L3 4 SEA FILE=REGISTRY SSS FUL L2  
L4 3 SEA FILE=CAPLUS L3

=> d 14 1-3 ibib abs hitstr

L4 ANSWER 1 OF 3 CAPLUS COPYRIGHT 2004 ACS on STN  
ACCESSION NUMBER: 2002:449684 CAPLUS  
DOCUMENT NUMBER: 137:33299  
TITLE: Preparation of heterocyclic ether substituted imidazoquinolines as immune response modulators for treatment of viral and neoplastic diseases  
INVENTOR(S): Charles, Leslie J.; Dellaria, Joseph F.; Griesgraber, George W.; Heppner, Philip D.; Manske, Karl J.; Mickelson, John W.; Rice, Michael J.  
PATENT ASSIGNEE(S): 3M Innovative Properties Company, USA  
SOURCE: PCT Int. Appl., 119 pp.  
CODEN: PIXXD2  
DOCUMENT TYPE: Patent  
LANGUAGE: English

10/624,014

FAMILY ACC. NUM. COUNT: 11

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002046193	A2	20020613	WO 2001-US46704	20011206
WO 2002046193	A3	20030227		
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, CZ, DE, DE, DK, DM, DZ, EC, EE, EE, ES, FI, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
AU 2002030618	A5	20020618	AU 2002-30618	20011206
US 2003065005	A1	20030403	US 2001-11921	20011206
US 6664260	B2	20031216		
EP 1339715	A2	20030903	EP 2001-990852	20011206
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
BR 2001016047	A	20030930	BR 2001-16047	20011206
EE 200300271	A	20031015	EE 2003-271	20011206
NO 2003002596	A	20030606	NO 2003-2596	20030606

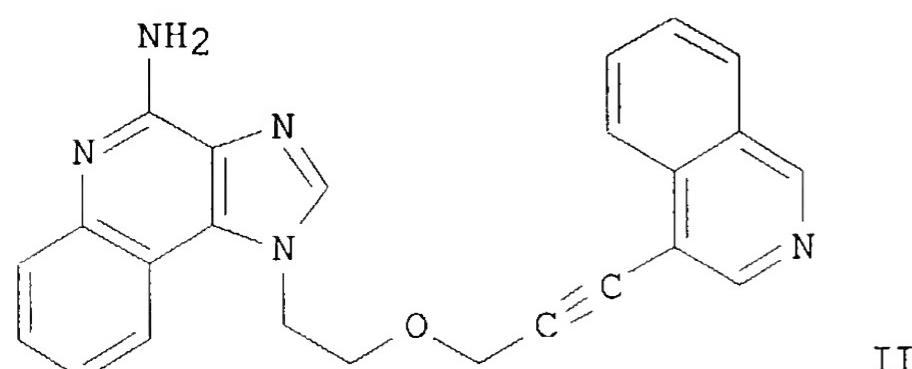
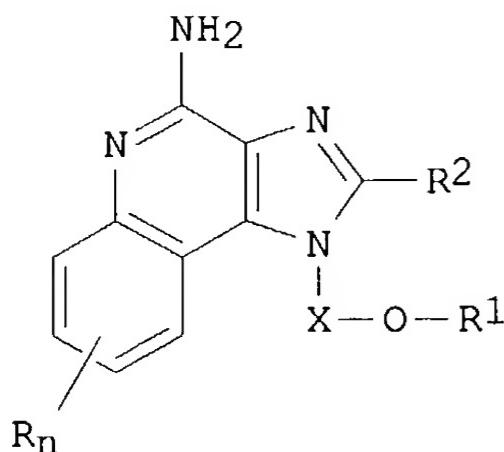
PRIORITY APPLN. INFO.:

US 2000-254218P P 20001208  
WO 2001-US46704 W 20011206

OTHER SOURCE(S):

MARPAT 137:33299

GI



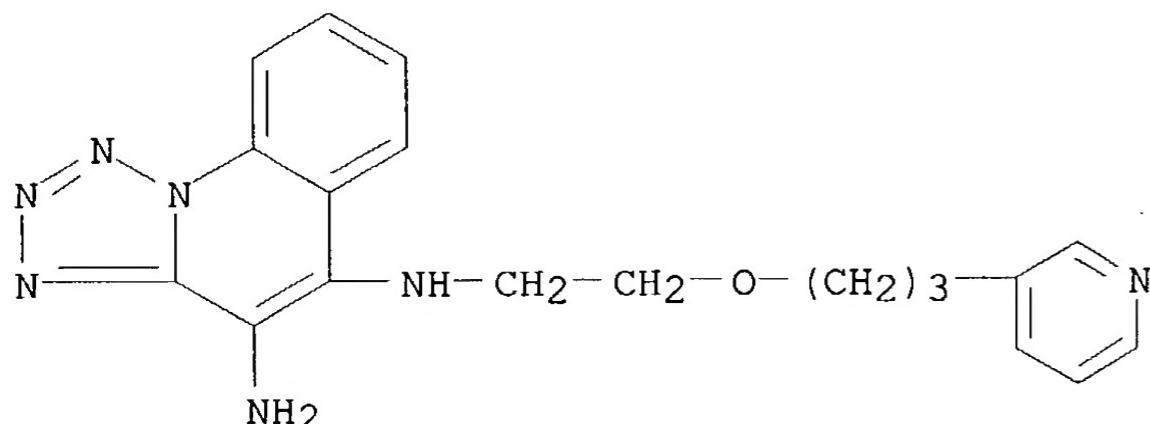
AB Title (tetrahydro)imidazoquinolines that contain ether and heterocyclyl or heteroaryl functionality at the 1-position [I; wherein X = CHR3, CHR3-alkyl, or CHR3-alkenyl; R = independently alkyl, alkoxy, OH, halo, or CF3; R1 = heteroaryl, heterocyclyl, R4-heteroaryl, or R4-heterocyclyl; R2

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= H, alkyl, alkenyl, (hetero)aryl, heterocyclyl, alkyl-Y-alkyl; alkyl-Y-alkenyl, or alkyl-Y-aryl in which the alkyl and alkenyl groups may be substituted; R3 = independently H or alkyl; R4 = alkyl or alkenyl, which may be interrupted by one or more O groups; Y = independently O or S(O)O-2; n = 0-4; or their pharmaceutically acceptable salts] were prep'd. as immune response modifiers which can induce the biosynthesis of various cytokines. For example, 2-(1H-imidazo[4,5-c]quinolin-1-yl)-1-ethanol was treated with NaOH and propargyl bromide in CH<sub>2</sub>Cl<sub>2</sub> to give the ether. Oxidization using 3-chloroperoxybenzoic acid afforded the 5N-oxide, which was reacted with trichloroacetyl isocyanate and hydrolyzed to give the amine. BOC protection, followed by addn. of 4-bromoisoquinoline in the presence of Pd(PPh<sub>3</sub>)<sub>2</sub>Cl<sub>2</sub> and TEA in DMF and treatment with TFA under nitrogen, afforded II. II induced interferon (IFN) and tumor necrosis factor .alpha. (TNF-.alpha.) in human blood cell systems with at concns. of 0.12 .mu.M and 3.33 .mu.M, resp. Thus, I are useful in the treatment of a variety of conditions, including viral and neoplastic diseases (no data).

IT 436158-53-1P  
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
(intermediate; prepn. of heterocyclic ether substituted imidazoquinolines as immune response modulators for treatment of viral and neoplastic diseases)

RN 436158-53-1 CAPLUS  
CN Tetrazolo[1,5-a]quinoline-4,5-diamine, N5-[2-[3-(3-pyridinyl)propoxy]ethyl]- (9CI) (CA INDEX NAME)



L4 ANSWER 2 OF 3 CAPLUS COPYRIGHT 2004 ACS on STN  
ACCESSION NUMBER: 1998:31310 CAPLUS  
DOCUMENT NUMBER: 128:102088  
TITLE: Process for preparing 1H-imidazo[4,5-c]quinolin-4-amines  
INVENTOR(S): Gerster, John F.; Lindstrom, Kyle J.  
PATENT ASSIGNEE(S): Minnesota Mining and Manufacturing Co., USA  
SOURCE: PCT Int. Appl., 39 pp.  
CODEN: PIXXD2  
DOCUMENT TYPE: Patent  
LANGUAGE: English  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9748704	A1	19971224	WO 1996-US16972	19961022
W:	AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, HU, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, TJ, TM, TR, TT, UA, UG, UZ, VN, AM,			

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AZ, BY, KG, KZ, MD, RU, TJ, TM  
RW: KE, LS, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR,  
IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML,  
MR, NE, SN, TD, TG

US 5741908	A	19980421	US 1996-673712	19960621
CA 2257846	AA	19971224	CA 1996-2257846	19961022
AU 9739565	A1	19980107	AU 1997-39565	19961022
AU 721036	B2	20000622		
EP 912565	A1	19990506	EP 1996-946380	19961022
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, NL, SE, PT, IE, FI				
NZ 333169	A	20000825	NZ 1996-333169	19961022
JP 2000512995	T2	20001003	JP 1998-502898	19961022
US 5998619	A	19991207	US 1998-61401	19980416
NO 9806002	A	19981218	NO 1998-6002	19981218
KR 2000016783	A	20000325	KR 1998-710393	19981218
US 6150523	A	20001121	US 1999-375587	19990817
US 6437131	B1	20020820	US 2000-678192	20001004
US 2002188127	A1	20021212	US 2002-180678	20020626
US 6534654	B2	20030318		
US 2003130516	A1	20030710	US 2003-352606	20030128
US 6613902	B2	20030902		
US 2003153762	A1	20030814	US 2003-360210	20030206
US 6624305	B2	20030923		
NO 2003002132	A	19981218	NO 2003-2132	20030512
NO 2003002133	A	19981218	NO 2003-2133	20030512
NO 2003002134	A	19981218	NO 2003-2134	20030512

PRIORITY APPLN. INFO.:

US 1996-673712	A	19960621
WO 1996-US16972	W	19961022
US 1998-61401	A3	19980416
US 1999-375587	A3	19990817
US 2000-678192	A3	20001004
US 2002-180678	A3	20020626

OTHER SOURCE(S): CASREACT 128:102088; MARPAT 128:102088

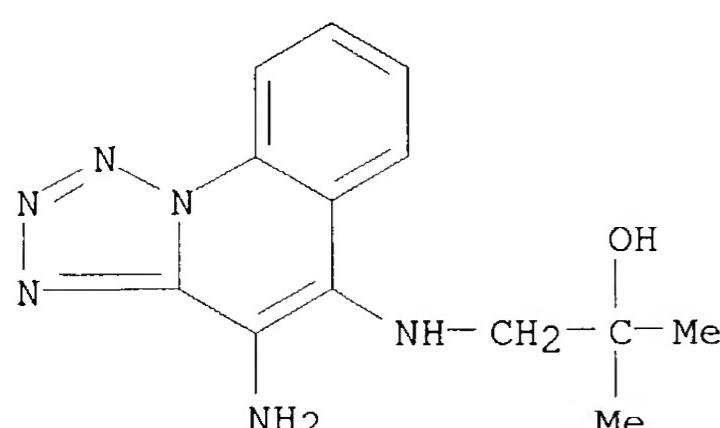
AB Tetrazolo[1,5-a]quinolin-5-ol (prepn. given) was nitrated and the product O-sulfonated to give, after amination and redn., N5-(2-methylpropyl)tetrazolo[1,5-a]quinolin-4,5-diamine which was cyclocondensed with (EtO)<sub>2</sub>CHOAc and the product treated with (Ph)<sub>3</sub>P to give 1-(2-methylpropyl)-4-(triphenylphosphoranylidene)amino-1H-imidazo[4,5-c]quinoline. The latter was hydrolyzed to a title compd.

IT 200198-38-5P 201031-00-7P 201031-02-9P

RL: IMF (Industrial manufacture); RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent) (process for prepg. 1H-imidazo[4,5-c]quinolin-4-amines)

RN 200198-38-5 CAPLUS

CN 2-Propanol, 1-[ (4-aminotetrazolo[1,5-a]quinolin-5-yl)amino]-2-methyl- (9CI) (CA INDEX NAME)

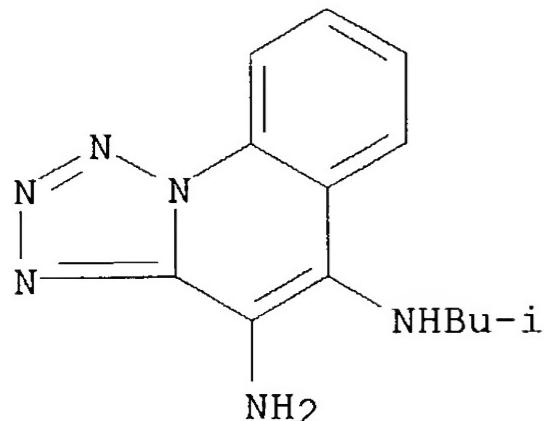


RN 201031-00-7 CAPLUS

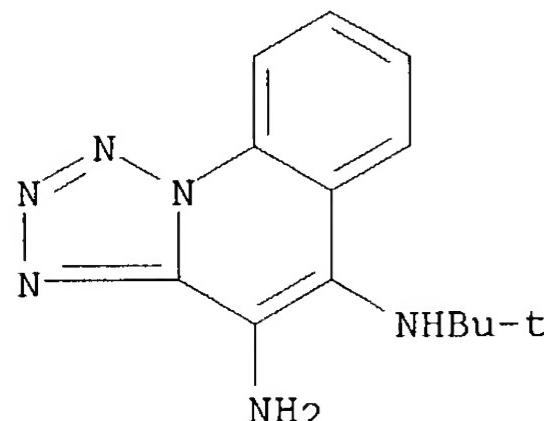
CN Tetrazolo[1,5-a]quinoline-4,5-diamine, N5-(2-methylpropyl)- (9CI) (CA

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INDEX NAME)



RN 201031-02-9 CAPLUS  
CN Tetrazolo[1,5-a]quinoline-4,5-diamine, N5-(1,1-dimethylethyl)- (9CI) (CA  
INDEX NAME)



L4 ANSWER 3 OF 3 CAPLUS COPYRIGHT 2004 ACS on STN  
ACCESSION NUMBER: 1997:776031 CAPLUS  
DOCUMENT NUMBER: 128:61513  
TITLE: Preparation of 6,7,8,9-tetrahydroimidazo[4,5-c]quinolinamines.  
INVENTOR(S): Lindstrom, Kyle J.  
PATENT ASSIGNEE(S): Minnesota Mining and Mfg. Co., USA  
SOURCE: U.S., 9 pp.  
CODEN: USXXAM  
DOCUMENT TYPE: Patent  
LANGUAGE: English  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

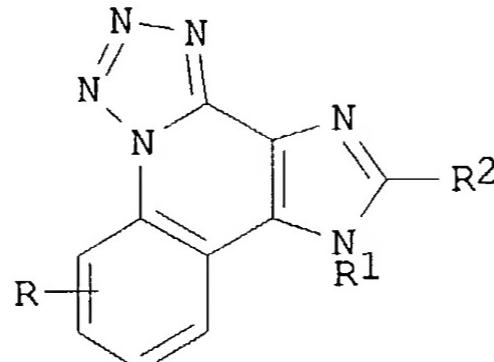
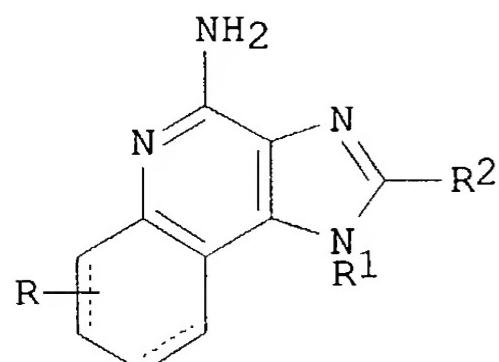
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 5693811	A	19971202	US 1996-669895	19960621
CA 2258262	AA	19971224	CA 1996-2258262	19961022
WO 9748703	A1	19971224	WO 1996-US16913	19961022
	W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, HU, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, TJ, TM, TR, TT, UA, UG, UZ, VN, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM RW: KE, LS, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG			
AU 9674658	A1	19980107	AU 1996-74658	19961022
AU 717564	B2	20000330		
EP 912564	A1	19990506	EP 1996-936832	19961022

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EP 912564 B1 20030108  
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, NL, SE, PT, IE, FI  
JP 2000512994 T2 20001003 JP 1998-502897 19961022  
IL 127347 A1 20020310 IL 1996-127347 19961022  
AT 230744 E 20030115 AT 1996-936832 19961022  
PT 912564 T 20030430 PT 1996-96936832 19961022  
ES 2185808 T3 20030501 ES 1996-936832 19961022  
NO 9806001 A 19981218 NO 1998-6001 19981218  
KR 2000016782 A 20000325 KR 1998-710392 19981218  
PRIORITY APPLN. INFO.: US 1996-669895 A 19960621  
WO 1996-US16913 W 19961022

OTHER SOURCE(S): CASREACT 128:61513; MARPAT 128:61513

GI



AB Title compds. (I; R = H, alkyl; R1 = H, cycloalkyl, alkyl, hydroxyalkyl, alkoxyalkyl, acyloxyalkyl, benzyloxy, aminoalkyl, etc.; R2 = H, alkyl, etc.; dotted lines = single bonds), were prep'd. by hydrogenation of I (variables as above; dotted lines = double bonds) or of imidazotetrazoloquinolines (II; variables as above) in strong acid in the presence of PtO<sub>2</sub>. Thus, .alpha.,.alpha.-dimethyl-6H-imidazo[4,5-c]tetrazolo[1,5-a]quinoline-6-ethanol (prepn. given) was hydrogenated in CF<sub>3</sub>CO<sub>2</sub>H over PtO<sub>2</sub> at 50 psi H<sub>2</sub> for 48 h to give 4-amino-.alpha.,.alpha.-dimethyl-6,7,8,9-tetrahydro-1H-imidazo[4,5-c]quinoline-1-ethanol.

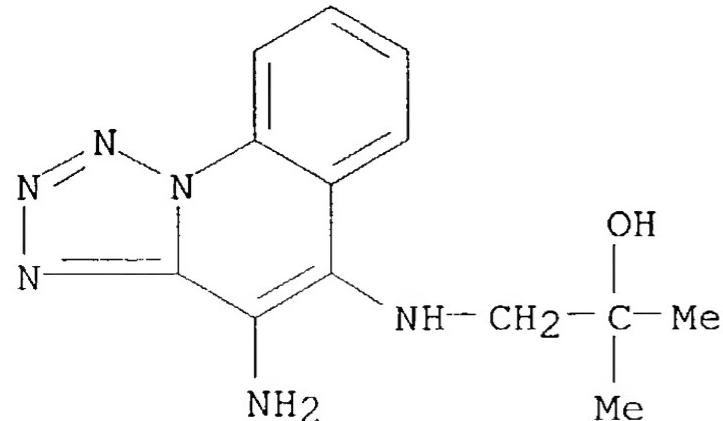
IT 200198-38-5P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(prepn. of 6,7,8,9-tetrahydroimidazo[4,5-c]quinolinamines)

RN 200198-38-5 CAPLUS

CN 2-Propanol, 1-[ (4-aminotetrazolo[1,5-a]quinolin-5-yl)amino]-2-methyl- (9CI) (CA INDEX NAME)



REFERENCE COUNT:

18

THERE ARE 18 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

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FILE 'USPATFULL' ENTERED AT 10:49:20 ON 12 JAN 2004

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CA INDEXING COPYRIGHT (C) 2004 AMERICAN CHEMICAL SOCIETY (ACS)

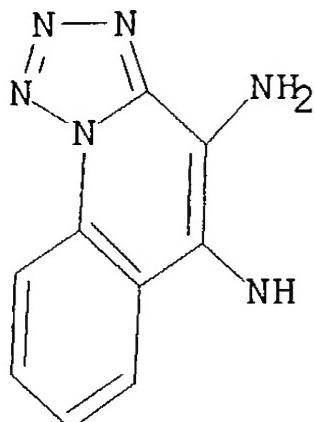
FILE 'USPAT2' ENTERED AT 10:49:20 ON 12 JAN 2004

CA INDEXING COPYRIGHT (C) 2004 AMERICAN CHEMICAL SOCIETY (ACS)

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L2

STR



G1 NH2,NO2

Structure attributes must be viewed using STN Express query preparation.

L3 4 SEA FILE=REGISTRY SSS FUL L2

L5 11 SEA L3

=> d 15 1-11 ibib abs hit

L5 ANSWER 1 OF 11 USPATFULL on STN

ACCESSION NUMBER: 2003:220471 USPATFULL

TITLE: Process for preparing imidazoquinolinamines

INVENTOR(S): Gerster, John F., Woodbury, MN, UNITED STATES

Lindstrom, Kyle J., Houlton, WI, UNITED STATES

PATENT ASSIGNEE(S): 3M Innovative Properties Company (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2003153762	A1	20030814
	US 6624305	B2	20030923
APPLICATION INFO.:	US 2003-360210	A1	20030206 (10)
RELATED APPLN. INFO.:	Division of Ser. No. US 2002-180678, filed on 26 Jun 2002, GRANTED, Pat. No. US 6534654 Division of Ser. No. US 2000-678192, filed on 4 Oct 2000, GRANTED, Pat. No. US 6437131 Division of Ser. No. US 1999-375587, filed on 17 Aug 1999, GRANTED, Pat. No. US 6150523 Division of Ser. No. US 1998-61401, filed on 16 Apr 1998, GRANTED, Pat. No. US 5998619 Continuation of Ser. No. US 1996-673712, filed on 21 Jun 1996, GRANTED, Pat. No. US 5741908		
DOCUMENT TYPE:	Utility		
FILE SEGMENT:	APPLICATION		
LEGAL REPRESENTATIVE:	3M INNOVATIVE PROPERTIES COMPANY, PO BOX 33427, ST. PAUL, MN, 55133-3427		
NUMBER OF CLAIMS:	42		
EXEMPLARY CLAIM:	1		
LINE COUNT:	1028		
CAS INDEXING IS AVAILABLE FOR THIS PATENT.			
AB	A process for preparing 1H-imidazo[4,5-c]quinolin-4-amines is disclosed. The process involves reacting a 6H-imidazo[4,5-c]tetrazolo[1,5-a]quinoline with triphenylphosphine and hydrolyzing the product thereof.		

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CAS INDEXING IS AVAILABLE FOR THIS PATENT.

IT 72470-51-0P 77177-26-5P 77177-27-6P, Tetrazolo[1,5-a]quinolin-5-ol  
112668-45-8P 200198-35-2P 200198-37-4P **200198-38-5P**  
200198-39-6P 200198-40-9P 201030-95-7P 201030-96-8P 201030-97-9P  
201030-98-0P 201030-99-1P **201031-00-7P** 201031-01-8P  
**201031-02-9P** 201031-03-0P 201031-04-1P  
(process for prep. 1H-imidazo[4,5-c]quinolin-4-amines)

L5 ANSWER 2 OF 11 USPATFULL on STN

ACCESSION NUMBER: 2003:188723 USPATFULL  
TITLE: PROCESS FOR PREPARING IMIDAZOQUINOLINAMINES  
INVENTOR(S): Gerster, John F., Woodbury, MN, UNITED STATES  
Lindstrom, Kyle J., Houlton, WI, UNITED STATES  
PATENT ASSIGNEE(S): 3M Innovative Properties Company (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2003130516	A1	20030710
	US 6613902	B2	20030902
APPLICATION INFO.:	US 2003-352606	A1	20030128 (10)
RELATED APPLN. INFO.:	Division of Ser. No. US 2002-180678, filed on 26 Jun 2002, GRANTED, Pat. No. US 6534654 Division of Ser. No. US 2000-678192, filed on 4 Oct 2000, GRANTED, Pat. No. US 6437131 Division of Ser. No. US 1999-375587, filed on 17 Aug 1999, GRANTED, Pat. No. US 6150523 Division of Ser. No. US 1998-61401, filed on 16 Apr 1998, GRANTED, Pat. No. US 5998619 Continuation of Ser. No. US 1996-673712, filed on 21 Jun 1996, GRANTED, Pat. No. US 5741908		

DOCUMENT TYPE: Utility

FILE SEGMENT: APPLICATION

LEGAL REPRESENTATIVE: Attention: Ted K. Ringsred, 3M Office of Intellectual Property Counsel, P.O. Box 33427, St. Paul, MN, 55133-3427

NUMBER OF CLAIMS: 42

EXEMPLARY CLAIM: 1

LINE COUNT: 1030

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB A process for preparing 1H-imidazo[4,5-c]quinolin-4-amines is disclosed. The process involves reacting a 6H-imidazo[4,5-c]tetrazolo[1,5-a]quinoline with triphenylphosphine and hydrolyzing the product thereof.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

IT 72470-51-0P 77177-26-5P 77177-27-6P, Tetrazolo[1,5-a]quinolin-5-ol  
112668-45-8P 200198-35-2P 200198-37-4P **200198-38-5P**  
200198-39-6P 200198-40-9P 201030-95-7P 201030-96-8P 201030-97-9P  
201030-98-0P 201030-99-1P **201031-00-7P** 201031-01-8P  
**201031-02-9P** 201031-03-0P 201031-04-1P  
(process for prep. 1H-imidazo[4,5-c]quinolin-4-amines)

L5 ANSWER 3 OF 11 USPATFULL on STN

ACCESSION NUMBER: 2002:330440 USPATFULL  
TITLE: Process for preparing imidazoquinolinamines  
INVENTOR(S): Gerster, John F., Woodbury, MN, UNITED STATES  
Lindstrom, Kyle J., Houlton, WI, UNITED STATES  
PATENT ASSIGNEE(S): 3M Innovative Properties Company (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2002188127	A1	20021212
	US 6534654	B2	20030318

10/624,014

APPLICATION INFO.: US 2002-180678 A1 20020626 (10)  
RELATED APPLN. INFO.: Division of Ser. No. US 2000-678192, filed on 4 Oct  
2000, GRANTED, Pat. No. US 6437131 Division of Ser. No.  
US 1999-375587, filed on 17 Aug 1999, GRANTED, Pat. No.  
US 6150523 Division of Ser. No. US 1998-61401, filed on  
16 Apr 1998, GRANTED, Pat. No. US 5998619 Continuation  
of Ser. No. US 1996-673712, filed on 21 Jun 1996,  
GRANTED, Pat. No. US 5741908

DOCUMENT TYPE: Utility  
FILE SEGMENT: APPLICATION  
LEGAL REPRESENTATIVE: Attention: Ted K. Ringsred, 3M Office of Intellectual  
Property Counsel, P.O. Box 33427, St. Paul, MN,  
55133-3427

NUMBER OF CLAIMS: 42  
EXEMPLARY CLAIM: 1  
LINE COUNT: 1031

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB A process for preparing 1H-imidazo[4,5-c]quinolin-4-amines is disclosed.  
The process involves reacting a 6H-imidazo[4,5-c]tetrazolo[1,5-a]quinoline with triphenylphosphine and hydrolyzing the product thereof.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

IT 72470-51-0P 77177-26-5P 77177-27-6P, Tetrazolo[1,5-a]quinolin-5-ol  
112668-45-8P 200198-35-2P 200198-37-4P **200198-38-5P**  
200198-39-6P 200198-40-9P 201030-95-7P 201030-96-8P 201030-97-9P  
201030-98-0P 201030-99-1P **201031-00-7P** 201031-01-8P  
**201031-02-9P** 201031-03-0P 201031-04-1P  
(process for prep. 1H-imidazo[4,5-c]quinolin-4-amines)

L5 ANSWER 4 OF 11 USPATFULL on STN

ACCESSION NUMBER: 2002:209682 USPATFULL  
TITLE: Process for preparing imidazoquinolinamines  
INVENTOR(S): Gerster, John F., Woodbury, MN, United States  
Lindstrom, Kyle J., Houlton, WI, United States  
PATENT ASSIGNEE(S): 3M Innovative Properties Company, St. Paul, MN, United  
States (U.S. corporation)

NUMBER	KIND	DATE
US 6437131	B1	20020820
US 2000-678192		20001004 (9)
Division of Ser. No. US 1999-375587, filed on 17 Aug 1999, now patented, Pat. No. US 6150523 Division of Ser. No. US 1998-61401, filed on 16 Apr 1998, now patented, Pat. No. US 5998619 Continuation of Ser. No. US 1996-673712, filed on 21 Jun 1996, now patented, Pat. No. US 5741908		

DOCUMENT TYPE: Utility  
FILE SEGMENT: GRANTED  
PRIMARY EXAMINER: Morris, Patricia L.  
LEGAL REPRESENTATIVE: Howard, MarySusan, Ringsred, Ted K., Sprague, Robert W.  
NUMBER OF CLAIMS: 2  
EXEMPLARY CLAIM: 1  
NUMBER OF DRAWINGS: 0 Drawing Figure(s); 0 Drawing Page(s)  
LINE COUNT: 844

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB A process for preparing 1H-imidazo[4,5-c]quinolin-4-amines is disclosed.  
The process involves reacting a 6H-imidazo[4,5-c]tetrazolo[1,5-a]quinoline with triphenylphosphine and hydrolyzing the product thereof

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

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IT 72470-51-0P 77177-26-5P 77177-27-6P, Tetrazolo[1,5-a]quinolin-5-ol  
112668-45-8P 200198-35-2P 200198-37-4P **200198-38-5P**  
200198-39-6P 200198-40-9P 201030-95-7P 201030-96-8P 201030-97-9P  
201030-98-0P 201030-99-1P **201031-00-7P** 201031-01-8P  
**201031-02-9P** 201031-03-0P 201031-04-1P  
(process for prep. 1H-imidazo[4,5-c]quinolin-4-amines)

L5 ANSWER 5 OF 11 USPATFULL on STN  
ACCESSION NUMBER: 2000:157572 USPATFULL  
TITLE: Process for preparing imidazoquinolinamines  
INVENTOR(S): Gerster, John F., Woodbury, MN, United States  
Lindstrom, Kyle J., Houlton, WI, United States  
PATENT ASSIGNEE(S): 3M Innovative Properties Company, St. Paul, MN, United States (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 6150523		20001121
APPLICATION INFO.:	US 1999-375587		19990817 (9)
RELATED APPLN. INFO.:	Division of Ser. No. US 1998-61401, filed on 16 Apr 1998, now patented, Pat. No. US 5998619 which is a continuation of Ser. No. US 1996-673712, filed on 21 Jun 1996, now patented, Pat. No. US 5741908		

DOCUMENT TYPE: Utility  
FILE SEGMENT: Granted  
PRIMARY EXAMINER: Rotman, Alan L.  
LEGAL REPRESENTATIVE: Howard, MarySusan, Ringsred, Ted K., Sprague, Robert W.  
NUMBER OF CLAIMS: 6  
EXEMPLARY CLAIM: 1  
LINE COUNT: 869

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB A process for preparing 1H-imidazo[4,5-c]quinolin-4-amines is disclosed. The process involves reacting a 6H-imidazo[4,5-c]tetrazolo[1,5-a]quinoline with triphenylphosphine and hydrolyzing the product thereof.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.  
IT 72470-51-0P 77177-26-5P 77177-27-6P, Tetrazolo[1,5-a]quinolin-5-ol  
112668-45-8P 200198-35-2P 200198-37-4P **200198-38-5P**  
200198-39-6P 200198-40-9P 201030-95-7P 201030-96-8P 201030-97-9P  
201030-98-0P 201030-99-1P **201031-00-7P** 201031-01-8P  
**201031-02-9P** 201031-03-0P 201031-04-1P  
(process for prep. 1H-imidazo[4,5-c]quinolin-4-amines)

L5 ANSWER 6 OF 11 USPATFULL on STN  
ACCESSION NUMBER: 1999:160235 USPATFULL  
TITLE: Process for preparing imidazoquinolinamines  
INVENTOR(S): Gerster, John F., Woodbury, MN, United States  
Lindstrom, Kyle J., Houlton, WI, United States  
PATENT ASSIGNEE(S): 3M Innovative Properties Company, St. Paul, MN, United States (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 5998619		19991207
APPLICATION INFO.:	US 1998-61401		19980416 (9)
RELATED APPLN. INFO.:	Continuation of Ser. No. US 1996-673712, filed on 21 Jun 1996, now patented, Pat. No. US 5741908		

DOCUMENT TYPE: Utility  
FILE SEGMENT: Granted  
PRIMARY EXAMINER: Rotman, Alan L.  
LEGAL REPRESENTATIVE: Howard, MarySusan, Ringsred, Ted K., Sprague, Robert W.

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NUMBER OF CLAIMS: 5  
EXEMPLARY CLAIM: 1  
LINE COUNT: 851

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB A process for preparing 1H-imidazo[4,5-c]quinolin-4-amines is disclosed.  
The process involves reacting a 6H-imidazo[4,5-c]tetrazolo[1,5-a]quinoline with triphenylphosphine and hydrolyzing the product thereof.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

IT 72470-51-0P 77177-26-5P 77177-27-6P, Tetrazolo[1,5-a]quinolin-5-ol  
112668-45-8P 200198-35-2P 200198-37-4P **200198-38-5P**  
200198-39-6P 200198-40-9P 201030-95-7P 201030-96-8P 201030-97-9P  
201030-98-0P 201030-99-1P **201031-00-7P** 201031-01-8P  
**201031-02-9P** 201031-03-0P 201031-04-1P  
(process for prep. 1H-imidazo[4,5-c]quinolin-4-amines)

L5 ANSWER 7 OF 11 USPATFULL on STN

ACCESSION NUMBER: 1998:42473 USPATFULL  
TITLE: Process for repairing imidazoquinolinamines  
INVENTOR(S): Gerster, John F., Woodbury, MN, United States  
Lindstrom, Kyle J., Houlton, WI, United States  
PATENT ASSIGNEE(S): Minnesota Mining and Manufacturing Company, St. Paul, MN, United States (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 5741908		19980421
APPLICATION INFO.:	US 1996-673712		19960621 (8)
DOCUMENT TYPE:	Utility		
FILE SEGMENT:	Granted		
PRIMARY EXAMINER:	Rotman, Alan L.		
LEGAL REPRESENTATIVE:	Howard, MarySusan, Ringsred, Ted K., Kirn, Walter N.		
NUMBER OF CLAIMS:	15		
EXEMPLARY CLAIM:	1		
LINE COUNT:	921		

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB A process for preparing 1H-imidazo[4,5-c]quinolin-4-amines is disclosed.  
The process involves reacting a 6H-imidazo[4,5-c]tetrazolo[1,5-a]quinoline with triphenylphosphine and hydrolyzing the product thereof.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

IT 72470-51-0P 77177-26-5P 77177-27-6P, Tetrazolo[1,5-a]quinolin-5-ol  
112668-45-8P 200198-35-2P 200198-37-4P **200198-38-5P**  
200198-39-6P 200198-40-9P 201030-95-7P 201030-96-8P 201030-97-9P  
201030-98-0P 201030-99-1P **201031-00-7P** 201031-01-8P  
**201031-02-9P** 201031-03-0P 201031-04-1P  
(process for prep. 1H-imidazo[4,5-c]quinolin-4-amines)

L5 ANSWER 8 OF 11 USPATFULL on STN

ACCESSION NUMBER: 97:112635 USPATFULL  
TITLE: Process for preparing tetrahydroimidazoquinolinamines  
INVENTOR(S): Lindstrom, Kyle J., Houlton, WI, United States  
PATENT ASSIGNEE(S): Minnesota Mining and Manufacturing Company, St. Paul, MN, United States (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 5693811		19971202
APPLICATION INFO.:	US 1996-669895		19960621 (8)
DOCUMENT TYPE:	Utility		
FILE SEGMENT:	Granted		

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PRIMARY EXAMINER: Ivy, C. Warren  
ASSISTANT EXAMINER: Smith, Lyman H.  
LEGAL REPRESENTATIVE: Griswold, Gary L., Kirn, Walter N., Ringsred, Ted K.  
NUMBER OF CLAIMS: 14  
EXEMPLARY CLAIM: 1  
LINE COUNT: 622

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB A process for preparing 6, 7, 8, 9-tetrahydro-1H-imidazo[4,5-c]quinolin-4-amines is disclosed. The process involves the reduction of a 1H-imidazo[4,5-c]quinolin-4-amine or of a 6H-imidazo[4,5-c]tetrazolo[1,5-a]quinoline.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

IT 525-76-8P, 2-Methyl-4-oxo-3,1-benzoxazine 72470-51-0P 77177-26-5P  
77177-27-6P, Tetrazolo[1,5-a]quinolin-5-ol 200198-35-2P 200198-37-4P  
**200198-38-5P** 200198-39-6P 200198-40-9P  
(prepn. of 6,7,8,9-tetrahdroimidazo[4,5-c]quinolinamines)

L5 ANSWER 9 OF 11 USPAT2 on STN  
ACCESSION NUMBER: 2003:220471 USPAT2  
TITLE: Process for preparing imidazoquinolinamines  
INVENTOR(S): Gerster, John F., Woodbury, MN, United States  
Lindstrom, Kyle J., Houlton, WI, United States  
PATENT ASSIGNEE(S): 3M Innovative Properties Company, St. Paul, MN, United States (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 6624305	B2	20030923
APPLICATION INFO.:	US 2003-360210		20030206 (10)
RELATED APPLN. INFO.:	Division of Ser. No. US 2002-180678, filed on 26 Jun 2002, now patented, Pat. No. US 6534654 Division of Ser. No. US 2000-678192, filed on 4 Oct 2000, now patented, Pat. No. US 6437131 Division of Ser. No. US 1999-375587, filed on 17 Aug 1999, now patented, Pat. No. US 6150523 Division of Ser. No. US 1998-61401, filed on 16 Apr 1998, now patented, Pat. No. US 5998619 Continuation of Ser. No. US 1996-673712, filed on 21 Jun 1996, now patented, Pat. No. US 5741908		

DOCUMENT TYPE: Utility  
FILE SEGMENT: GRANTED  
PRIMARY EXAMINER: Morris, Patricia L.  
LEGAL REPRESENTATIVE: Ersfeld, Dean A.  
NUMBER OF CLAIMS: 8  
EXEMPLARY CLAIM: 1  
NUMBER OF DRAWINGS: 0 Drawing Figure(s); 0 Drawing Page(s)  
LINE COUNT: 896

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB A process for preparing 1H-imidazo[4,5-c]quinolin-4-amines is disclosed. The process involves reacting a 6H-imidazo[4,5-c]tetrazolo[1,5-a]quinoline with triphenylphosphine and hydrolyzing the product thereof.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

IT 72470-51-0P 77177-26-5P 77177-27-6P, Tetrazolo[1,5-a]quinolin-5-ol  
112668-45-8P 200198-35-2P 200198-37-4P **200198-38-5P**  
200198-39-6P 200198-40-9P 201030-95-7P 201030-96-8P 201030-97-9P  
201030-98-0P 201030-99-1P **201031-00-7P** 201031-01-8P  
**201031-02-9P** 201031-03-0P 201031-04-1P  
(process for prep. 1H-imidazo[4,5-c]quinolin-4-amines)

L5 ANSWER 10 OF 11 USPAT2 on STN

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ACCESSION NUMBER: 2003:188723 USPAT2  
TITLE: Process for preparing imidazoquinolinamines  
INVENTOR(S): Gerster, John F., Woodbury, MN, United States  
Lindstrom, Kyle J., Houlton, WI, United States  
PATENT ASSIGNEE(S): 3M Innovative Properties Company, St. Paul, MN, United States (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 6613902	B2	20030902
APPLICATION INFO.:	US 2003-352606		20030128 (10)
RELATED APPLN. INFO.:	Division of Ser. No. US 2002-180678, filed on 26 Jun 2002, now patented, Pat. No. US 6534654 Division of Ser. No. US 2000-678192, filed on 4 Oct 2000, now patented, Pat. No. US 6437131 Division of Ser. No. US 1999-375587, filed on 17 Aug 1999, now patented, Pat. No. US 6150523 Division of Ser. No. US 1998-61401, filed on 16 Apr 1998, now patented, Pat. No. US 5998619 Continuation of Ser. No. US 1996-673712, filed on 21 Jun 1996, now patented, Pat. No. US 5741908		
DOCUMENT TYPE:	Utility		
FILE SEGMENT:	GRANTED		
PRIMARY EXAMINER:	Morris, Patricia L.		
LEGAL REPRESENTATIVE:	Ersfeld, Dean A.		
NUMBER OF CLAIMS:	1		
EXEMPLARY CLAIM:	1		
NUMBER OF DRAWINGS:	0 Drawing Figure(s); 0 Drawing Page(s)		
LINE COUNT:	867		
CAS INDEXING IS AVAILABLE FOR THIS PATENT.			
AB	A process for preparing 1H-imidazo[4,5-c]quinolin-4-amines is disclosed. The process involves reacting a 6H-imidazo[4,5-c]tetrazolo[1,5-a]quinoline with triphenylphosphine and hydrolyzing the product thereof.		

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

IT	72470-51-0P	77177-26-5P	77177-27-6P	Tetrazolo[1,5-a]quinolin-5-ol	
	112668-45-8P	200198-35-2P	200198-37-4P	<b>200198-38-5P</b>	
	200198-39-6P	200198-40-9P	201030-95-7P	201030-96-8P	201030-97-9P
	201030-98-0P	201030-99-1P	<b>201031-00-7P</b>	201031-01-8P	
	<b>201031-02-9P</b>	201031-03-0P	201031-04-1P		
	(process for prep. 1H-imidazo[4,5-c]quinolin-4-amines)				

L5 ANSWER 11 OF 11 USPAT2 on STN

ACCESSION NUMBER: 2002:330440 USPAT2

TITLE: Process for preparing imidazoquinolinamines

INVENTOR(S): Gerster, John F., Woodbury, MN, United States

Lindstrom, Kyle J., Houlton, WI, United States

PATENT ASSIGNEE(S): 3M Innovative Properties Company, St. Paul, MN, United States (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 6534654	B2	20030318
APPLICATION INFO.:	US 2002-180678		20020626 (10)
RELATED APPLN. INFO.:	Division of Ser. No. US 2000-678192, filed on 4 Oct 2000, now patented, Pat. No. US 6437131 Division of Ser. No. US 1999-375587, filed on 17 Aug 1999, now patented, Pat. No. US 6150523 Division of Ser. No. US 1998-61401, filed on 16 Apr 1998, now patented, Pat. No. US 5998619 Continuation of Ser. No. US 1996-673712, filed on 21 Jun 1996, now patented, Pat. No. US 5741908		
DOCUMENT TYPE:	Utility		

10/624,014

FILE SEGMENT: GRANTED  
PRIMARY EXAMINER: Morris, Patricia L.  
LEGAL REPRESENTATIVE: Ersfeld, Dean A.  
NUMBER OF CLAIMS: 6  
EXEMPLARY CLAIM: 1  
NUMBER OF DRAWINGS: 0 Drawing Figure(s); 0 Drawing Page(s)  
LINE COUNT: 887

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB A process for preparing 1H-imidazo[4,5-c]quinolin-4-amines is disclosed.  
The process involves reacting a 6H-imidazo[4,5-c]tetrazolo[1,5-a]quinoline with triphenylphosphine and hydrolyzing the product thereof.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

IT 72470-51-0P 77177-26-5P 77177-27-6P, Tetrazolo[1,5-a]quinolin-5-ol  
112668-45-8P 200198-35-2P 200198-37-4P **200198-38-5P**  
200198-39-6P 200198-40-9P 201030-95-7P 201030-96-8P 201030-97-9P  
201030-98-0P 201030-99-1P **201031-00-7P** 201031-01-8P  
**201031-02-9P** 201031-03-0P 201031-04-1P  
(process for prep. 1H-imidazo[4,5-c]quinolin-4-amines)